



ATTACHMENT I – General Qualifications

ANNUAL REQUEST FOR QUALIFICATIONS AND EXPERIENCE NO:
ADSP015-00004729

STATE PROCUREMENT OFFICE
Department of Administration
100 North 15th Avenue, Suite 201
Phoenix, Arizona 85007

(If a firm has branch offices, complete for each specific branch office seeking work.)

1. Annual Request for Qualifications

| | |
|---|---|
| a. FIRM (OR BRANCH OFFICE) NAME: | CR Engineers, Inc. |
| b. FIRM (OR BRANCH OFFICE) STREET: | 16719 East Palisades Boulevard Suite 202 |
| c. FIRM (OR BRANCH OFFICE) CITY: | Fountain Hills |
| d. FIRM (OR BRANCH OFFICE) STATE: | Arizona |
| e. FIRM (OR BRANCH OFFICE) ZIP CODE: | 85268 |
| f. YEAR ESTABLISHED: | 1985 |
| (g1). OWNERSHIP - TYPE: | S-Corporation |
| (g2) OWNERSHIP - SMALL BUSINESS STATUS: | SBE/SBC/ DBE |
| h. POINT OF CONTACT NAME AND TITLE: | Catherine Alcorn, P.E. / President |
| i. POINT OF CONTACT TELEPHONE NUMBER: | 480.816.5541 |
| j. POINT OF CONTACT E-MAIL ADDRESS: | calcorn@creng.com |
| k. NAME OF FIRM (If block 1a is a branch office): | |



ATTACHMENT I – General Qualifications
ANNUAL REQUEST FOR QUALIFICATIONS AND EXPERIENCE NO:
ADSP015-00004729

STATE PROCUREMENT OFFICE
Department of Administration
100 North 15th Avenue, Suite 201
Phoenix, Arizona 85007

3. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST YEAR

| a. Approximate No. of Projects | b. Experience | c. Revenue Index Number (see below) |
|--------------------------------|---|-------------------------------------|
| 20 | Airports: Navajids; Airport Lighting; Aircraft Fueling | 3 |
| 4 | Airports: Terminals and Hangars; Freight Handling | 1 |
| 2 | Electrical Designs and Studies | 1 |
| 3 | Garages; Vehicles Maintenance Facilities; Parking | 1 |
| 9 | Highways; Streets; Airfield Paving; Parking Lots | 1 |
| 1 | Lighting (Interior; Display; Theater; Etc.) | 1 |
| 1 | Lighting (Exteriors; Streets; Memorials; Athletic Fields, Etc.) | 1 |
| 1 | Railroad; Rapid Transit | 1 |
| 5 | Recreation Facilities (Parks, Marinas, Etc.) | 1 |
| 4 | Sustainable Design | 1 |
| 3 | Swimming Pools | 1 |
| 3 | Testing and Inspection Services | 1 |
| 2 | Traffic and Transportation Engineering | 1 |
| 2 | Waste Water Treatment Facility | 1 |
| 2 | Water Well Rehabilitation; Water Well Work | 1 |
| | | |

PROFESSIONAL SERVICES REVENUE INDEX NUMBER

- | | |
|---|---|
| 1. Less than \$100,000 | 6. \$2 million to less than \$5 million |
| 2. \$100,000 to less than \$250,000 | 7. \$5 million to less than \$10 million |
| 3. \$250,000 to less than \$500,000 | 8. \$10 million to less than \$25 million |
| 4. \$500,000 to less than \$1 million | 9. \$25 million to less than \$50 million |
| 5. \$1 million to less than \$2 million | 10. \$50 million or greater |



ATTACHMENT I – General Qualifications

**ANNUAL REQUEST FOR QUALIFICATIONS AND EXPERIENCE NO:
ADSP015-00004729**

**STATE PROCUREMENT OFFICE
Department of Administration
100 North 15th Avenue, Suite 201
Phoenix, Arizona 85007**

4. Resumes of Key Personnel Proposed for this Contract *(Complete one Section 4 for each key person.)*

| | | | |
|--|---|--|----------------------------|
| a. NAME Catherine Alcorn | b. ROLE IN THIS CONTRACT Electrical Engineer/Project Manager | c. YEARS EXPERIENCE | |
| | | 1. TOTAL 20 | 2. WITH CURRENT FIRM 20 |
| d. LOCATION <i>(City and State)</i> Fountain Hills, Arizona | | | |
| e. EDUCATION <i>(DEGREE AND SPECIALIZATION)</i> B.S.E. – Electrical Engineering | | f. PROFESSIONAL TRAINING – REGISTRATIONS Arizona – 36696 Nevada - 016372 New Mexico – 15721 | |

g. OTHER PROFESSIONAL QUALIFICATIONS *(Organizations, Awards, etc.)* Application & Design Consideration for Power Quality Products; IESNA Lighting Fundamentals ED 100/IES; Serco Aviation Ground and Approach Lighting Course; ACEC (of Arizona) Leadership in Engineering Administration Program (LEAP); Water/Wastewater for Consultants/BSE; Grounding of Electrical Systems/NTT; ACEC (of Arizona) Senior Officers & Associates Roundtable (SOAR): EasyPower Hands-On, Protective Device Coordination, & ARC Flash Hazard Analysis & Implementation PowerClass; Fire Alarm Life Safety Education; Designing & Specifying Emergency Power System; National Electrical Code/NTT (1996); ADB Airfield Lighting Engineering Seminar; Past=President – ACEC (American Council of Engineering Companies) of Arizona; Arizona Airports Association.

H. RELEVANT PROJECTS

| | | | |
|----|--|-------------------------------------|--|
| | (1) TITLE AND LOCATION <i>(City and State)</i> Cortez Pool Design (Phoenix, Arizona) | (2) YEAR COMPLETED | |
| | | Professional Services 2013 | Construction (if applicable) 2014 |
| 1. | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE CRE prepared a set of electrical drawings, specifications and cost estimates for the Cortez Pool project located in Phoenix, Arizona. The project consisted of three separate pools and new equipment area. The existing electrical utility service from SRP is rated 200 Amps, 277/480 Volts, 3 phase, 4 wire. To support the new motor loads, the utility service was upgraded. The electrical design scope included the following: an upgrade to the existing electrical service entrance section with required utility coordination; grounding and bonding design per the National Electrical Code requirements; three phase electrical distribution for a motor control center at the equipment area; electrical distribution for underwater lighting, deck lighting, electrical infrastructure design for a future PA system, and other miscellaneous convenience outlets. Photometric calculations of the deck lighting was also provided. | <input checked="" type="checkbox"/> | Check if project performed with current firm |
| | (1) TITLE AND LOCATION <i>(City and State)</i> Phoenix Deer Valley Airport Taxiway A Reconstruction (Deer Valley, Arizona) | (2) YEAR COMPLETED | |
| | | Professional Services 2011 | Construction (if applicable) 2013 |
| 2. | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE CRE provided electrical construction drawings for the reconstruction and shift of Taxiway A at Phoenix Deer Valley Airport. The taxiway was reconstructed to a width of 35' with 12' unpaved shoulders. The project included multiple phasing for construction. The electrical design consisted of a new taxiway edge lighting system to include a 5KV airfield lighting cable homerun replacement back to the existing electrical vault utilizing the existing ductbank and handhole infrastructure, specification of new LED Medium Intensity Edge Lights (MITL) in new light bases and isolation transformers, relocation of airfield guidance signs and modifications as required to meet current FAA AC requirements which required new ductbank system north of the taxiway and relocation of the existing elevated runway guard lights. One new ferroresonant constant current regulator was specified to replace the two existing 15KW SCR type constant current regulators which provide power to the existing Taxiway A edge lights. Modifications to the existing Airfield Lighting Control and Monitoring System (ALCMS) was specified as part of these circuit changes. | <input checked="" type="checkbox"/> | Check if project performed with current firm |
| | (1) TITLE AND LOCATION <i>(City and State)</i> Phoenix Sky Harbor International Airport (PSHIA) East Hold Bay Pavement Reconstruction (Phoenix, Arizona) | (2) YEAR COMPLETED | |
| | | Professional Services 2014 | Construction (if applicable) |
| 3. | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE CRE provided electrical construction designs, plans, specifications, quantities, estimates, engineer's report, and bid-phase services for the East Hold Bay Pavement Reconstruction project at PSHIA. The electrical scope of work included: high mast floodlighting LED fixtures were evaluated and photometric calculations were provided, the tug area light poles (17) and interior light poles were evaluated for replacement to increase light levels, specification for protecting existing 24 - 2" ductbanks, the existing manhole lid / hatch assembly required evaluation to determine elevation adjustment or replacement requirements, the removal of 3 | <input checked="" type="checkbox"/> | Check if project performed with current firm |



ATTACHMENT I – General Qualifications

ANNUAL REQUEST FOR QUALIFICATIONS AND EXPERIENCE NO:
ADSP015-00004729

STATE PROCUREMENT OFFICE
Department of Administration
100 North 15th Avenue, Suite 201
Phoenix, Arizona 85007

existing (not in use) airfield guidance sign concrete bases along with 175" of 1 – 2" conduit, 8 L-867 taxiway edge light bases along the south edge of the hold pen taxi-lane required removal and re-installation during construction that consisted of specification of removal of approx. 550' of 1 – 2 conduits. Design and specification for temporary power connections during the reconstruction of a portion of Taxiway Tango (southwestern radius) edge lighting system was required.

(1) TITLE AND LOCATION (*City and State*)

All Saints' Episcopal Church Parking Lot Lighting (Phoenix, Arizona)

(2) YEAR COMPLETED

Professional Services
2014

Construction (if applicable)

(3) BRIEF DESCRIPTION (*Brief scope, size, cost, etc.*) AND SPECIFIC ROLE



Check if project performed with current firm

CRE provided electrical construction plans and specifications for the parking lot lighting improvements at All Saints' Episcopal Church. The scope of work included the following electrical design elements: Site investigation and review of the existing parking lot lighting circuitry and conduit infrastructure. Demolition of the existing parking lot lighting. The existing circuit conductors and underground conduit were reutilized where possible. Design of new parking lot lighting and exterior building lighting in the garden area utilizing LED fixtures to match those specified in the All Saints' Episcopal Church and Day School – Phase 1 Improvements. The Base Bid was specified to include the replacement of the parking lot lighting in the main church parking and the exterior building lighting in the garden area.

(1) TITLE AND LOCATION (*City and State*)

Town of Florence – Territory Square Library – Recreation Complex (Florence, Arizona)

(2) YEAR COMPLETED

Professional Services
2014

Construction (if applicable)

(3) BRIEF DESCRIPTION (*Brief scope, size, cost, etc.*) AND SPECIFIC ROLE



Check if project performed with current firm

CRE provided electrical construction plans and specifications for the Town of Florence – Territory Square Library/Recreation Complex. The scope of work included:
Aquatic Center: Provide separate 3 Phase 480V Service Entrance Section design for the Aquatic Center, utility coordination for incoming electrical service, panel board design for bath house, pools, concessions and site electrical, exterior deck and building lighting design per Town of Florence requirements, motor control design for pumps, control wiring design for the pumping system, electrical design for any HVAC systems.
Provide all interior lighting designs of concessions and bath house (moisture and vapor proof fixtures where required), underwater lighting design, grounding per the National Electrical Code, PA systems design, fire alarm design, telephone system design. Provide any other miscellaneous items such as convenience outlets, conductor and conduit sizing to all equipment, circuit breaker design. Provide panel schedules for the panel boards, electrical load calculations, fault current calculations, electrical single line diagrams, and any lighting photometrics required.
All lights are LED in type.

5. **Library/Recreational Complex:** Provide separate 3 Phase 480V Service Entrance Section design for the building, utility coordination for incoming electrical service, panel board design for the entire building, building exterior and interior lighting design. All lighting selections are LED and all lighting design controls for energy conservation.

Electrical design for HVAC systems, PA systems design, Fire alarm design, CCTV system design, Access control system design, Communications systems design (telephone, data, etc.). Provide any other miscellaneous items such as convenience outlets. Conductor and conduit sizing to all equipment, and circuit breaker design.

Provide panel schedules for the panel boards, electrical load calculations, fault current calculations, electrical single line diagrams. Provide any lighting photometrics, back-up power (UPS) design and all grounding including specialty for telecommunications and data equipment, as well as any dedicated power feeds that were needed.

Site: Provide separate 3 Phase 480V Service Entrance Section design for the Site. Utility coordination for incoming electrical service. Switchboard/Panel board design for site, sports fields and courts. General exterior lighting design per Town of Florence requirements, lighting design for all sports fields and courts and any necessary pathway lighting design. Lighting photometrics for each sports field and court. Lighting controls for each sports field and court. Provide any other miscellaneous items such as convenience outlets, conductor and conduit sizing to all equipment, circuit breaker design. Provide panel schedules for the panel boards, electrical load calculations, fault current calculations, electrical single line diagrams, communications design for the sports fields and court, any parking lot lighting and provisions for future lighting/electrical for any areas.



ATTACHMENT I – General Qualifications

ANNUAL REQUEST FOR QUALIFICATIONS AND EXPERIENCE NO:
ADSP015-00004729

STATE PROCUREMENT OFFICE
Department of Administration
100 North 15th Avenue, Suite 201
Phoenix, Arizona 85007

4. Resumes of Key Personnel Proposed for this Contract (Complete one Section 4 for each key person.)

| | | | |
|----------------------------|---|---------------------|----------------------------|
| a. NAME John Alcorn Jr. | b. ROLE IN THIS CONTRACT Electrical Engineer/Project Manager | c. YEARS EXPERIENCE | |
| | | 1. TOTAL 16 | 2. WITH CURRENT FIRM 16 |

d. LOCATION (City and State)
Fountain Hills, Arizona

| | |
|---|---|
| e. EDUCATION (DEGREE AND SPECIALIZATION) B.S.E. – Electrical Engineering B.S. in Health Science | f. PROFESSIONAL TRAINING – REGISTRATIONS Arizona – 39727 California – 16786 Kansas - 18236 |
|---|---|

g. OTHER PROFESSIONAL QUALIFICATIONS (Organizations, Awards, etc.) IESNA Lighting Fundamentals ED 100/IES; Designing Electrical Systems; APS and Univ. of New Mexico Solar Design and NEC Code Compliance; Application & Design Consideration Class for Power Quality Products; National Electrical Code/NTT (1999); Fire Alarm Life Safety Education; Liability IQ for Architects & Engineers; Problems and Solutions of Electrical Power Delivery; Grounding of Electrical Distribution Systems; PSMJ Principals’ Boot Camp; Crouse-Hinds Airport Lighting Systems Seminar; PV Power Systems/NEC with John Wiles; PV Interconnection and Inspections by APS; Board Member – ACEC of Arizona

H. RELEVANT PROJECTS

| | | |
|----|--|-------------------------------|
| 1. | (1) TITLE AND LOCATION (City and State) ADOT Black Mountain Boulevard State Route 51/101 TI to Cave Creek Road (Phoenix, Arizona) | (2) YEAR COMPLETED |
| | (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE CRE provided the design for roadway LED lighting along Black Mountain Boulevard as well as ½ mile of roadway LED lighting from Rough Rider to Pinnacle Peak Roads. The scope included complying with current Design Criteria presented in the ADOT Roadway Design Guidelines established in the 2004 evaluation. The LED lighting design included: complete freeway lighting design including the freeway mainline, entrance and exit areas, ramps and crossroads. Also included was under-deck lighting, sign lighting, Pedestrian Bridge Lighting. Power distribution design for all lighting (SES design, conductor, Conduit, Panel schedules). The lighting design was also coordinated with all current applicable standards outside of ADOT established by the City of Arizona and Arizona Public Service. | Professional Services 2014 |
| 2. | (1) TITLE AND LOCATION (City and State) VA Cemetery Well Equipment Relocation (Phoenix, Arizona) | (2) YEAR COMPLETED |
| | (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE CRE prepared a set of electrical plans and specifications for replacement and relocation of the VA Water Facilities along Black Mountain Boulevard. The water design included specification of all new electrical and mechanical equipment, which was identical to the existing equipment for the new location and new underground infrastructure at/from the existing location to the new location. Connection of the existing well head, coordination with the electrical utility company to provide a new service feeder to the site. Construction phasing plans and specifications to maintain the existing well operational during construction with minimal operation downtime for cut over from existing electrical/mechanical systems to new relocated equipment. Demolition plans for all existing electrical/mechanical equipment once the new systems are in place and are tested and fully operational. | Professional Services 2014 |
| 3. | (1) TITLE AND LOCATION (City and State) Desert Sky Transit Center (Phoenix, Arizona) | (2) YEAR COMPLETED |
| | (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE CRE prepared a set of electrical plans and specifications for the design of the Desert Sky Transit Center. The project consisted of providing electrical, lighting and solar design (cost-neutral photovoltaic system) that consisted of: service entrance section design and utility coordination, load calculations, panel schedules, fault current calculations, conductor and conduit sizing. The Transit Center lighting design per City of Phoenix requirements included: driving area lighting, under canopy lighting, passenger platform lighting, landscape lighting, seating area lighting, signage lighting, entry road lighting and coordination with the design team for the best wiring routing, as well as power distribution to all lighting. Solar design included: analysis with a report showing cost comparisons of different solar installs, solar design incorporating a “grid tie-back” system, coordination with the utility company and the City of Phoenix to provide a | Professional Services 2014 |



ATTACHMENT I – General Qualifications

ANNUAL REQUEST FOR QUALIFICATIONS AND EXPERIENCE NO:
ADSP015-00004729

STATE PROCUREMENT OFFICE
Department of Administration
100 North 15th Avenue, Suite 201
Phoenix, Arizona 85007

cost-neutral solar design while acquiring the best available rates for solar, power distribution to all solar equipment, and provisions for possible future consideration (conduit infrastructure) and the use of solar panels (non-film). Power distribution and conduit infrastructure for CCTV and site special systems, building electrical and lighting design based on a building up to 2,500 square feet. Power distribution was provided to any interpretive displays that needed electricity and to site maintenance receptacles.

(1) TITLE AND LOCATION (*City and State*)

North Scottsdale Park and Ride (Scottsdale, Arizona)

(2) YEAR COMPLETED

Professional Services
2011

Construction (if applicable)
2013

(3) BRIEF DESCRIPTION (*Brief scope, size, cost, etc.*) AND SPECIFIC ROLE

4. CRE prepared electrical and photovoltaic construction documents for the North Scottsdale Park and Ride. The project consisted of providing electrical, lighting and solar design that consisted of: service entrance section design and utility coordination, load calculations, panel schedules, fault current calculations, conductor and conduit sizing and power distribution to all lighting. The park and ride lighting design per City of Scottsdale and Scottsdale Airport requirements included: driving area lighting requirements, under canopy lighting requirements, passenger platform lighting requirements, landscape lighting design, bus bay lighting, seating area lighting design, signage lighting design, entry road lighting design, obstruction lights, and lighting design incorporating FAA guidelines. The solar design included: analysis with report showing cost comparisons of different solar installs, solar design incorporates a “grid tie-back” system, passive solar design while maintaining City of Scottsdale and Scottsdale Airport lighting standards and requirements, and power distribution to all solar equipment.



Check if project performed with current firm

(1) TITLE AND LOCATION (*City and State*)

Salt River Pima Maricopa Indian Community, Lonely Cactus Solar Senior Housing (Scottsdale, Arizona)

(2) YEAR COMPLETED

Professional Services
2012

Construction (if applicable)
2014

(3) BRIEF DESCRIPTION (*Brief scope, size, cost, etc.*) AND SPECIFIC ROLE

5. CRE prepared a set of electrical plans and specifications for the design of the solar design for the Lonely Cactus Senior Housing. The scope of work included solar design incorporating a “grid tie-back” system to offset 80% of the electrical consumption, power distribution to all solar equipment, solar conduit infrastructure and conductor design, inverter, combiner, panel, disconnect sizing, solar panel rack system, and structural analysis for additional roof load. The electrical plans provided met ECS and SRP-MIC requirements and SRP requirements for commercial solar projects.



Check if project performed with current firm



ATTACHMENT I – General Qualifications

ANNUAL REQUEST FOR QUALIFICATIONS AND EXPERIENCE NO:
ADSP015-00004729

STATE PROCUREMENT OFFICE
Department of Administration
100 North 15th Avenue, Suite 201
Phoenix, Arizona 85007

4. Resumes of Key Personnel Proposed for this Contract (Complete one Section 4 for each key person.)

| | | | |
|--|---|--|----------------------------|
| a. NAME Kerry Leonard | b. ROLE IN THIS CONTRACT Senior Designer | c. YEARS EXPERIENCE | |
| | | 1. TOTAL 24 | 2. WITH CURRENT FIRM 22 |
| d. LOCATION (City and State) Fountain Hills, Arizona | | | |
| e. EDUCATION (DEGREE AND SPECIALIZATION) Mesa Community College: Electrical/Mechanical Drafting I & II; Computer Aided Drafting I, II & III; Auto Lisp Programming I & II Gateway Community College: Electrical Construction Fundamentals | | f. PROFESSIONAL TRAINING – REGISTRATIONS IES – Illuminating Engineering Society, Manager 1998, Arizona Chapter IES – Illuminating Engineering Society, Secretary 1999, Arizona Chapter | |
| g. OTHER PROFESSIONAL QUALIFICATIONS (Organizations, Awards, etc.) NCQLP – National Council on Qualifications for Lighting Professionals; Wonderware; Windows NT; Ruud Lighting Specifier; WI; Microsoft Windows Solution; Lithonia Lighting Specifier: Holophane Advanced Roadway Lighting; Lighting and Law: ASHRAE/IESNA Standards; APS and Univ. of New Mexico Solar Design and NEC Code Compliance | | | |

H. RELEVANT PROJECTS

| | | |
|---|-------------------------------|------------------------------|
| (1) TITLE AND LOCATION (City and State) Town of Florence – Territory Square Library – Recreation Complex (Florence, Arizona) | (2) YEAR COMPLETED | |
| | Professional Services 2014 | Construction (if applicable) |
| (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE CRE provided electrical construction plans and specifications for the Town of Florence – Territory Square Library/Recreation Complex. The scope of work included: Aquatic Center: Provide separate 3 Phase 480V Service Entrance Section design for the Aquatic Center, utility coordination for incoming electrical service, panel board design for bath house, pools, concessions and site electrical, exterior deck and building lighting design per Town of Florence requirements, motor control design for pumps, control wiring design for the pumping system, electrical design for any HVAC systems. Provide all interior lighting designs of concessions and bath house (moisture and vapor proof fixtures where required), underwater lighting design, grounding per the National Electrical Code, PA systems design, fire alarm design, telephone system design. Provide any other miscellaneous items such as convenience outlets, conductor and conduit sizing to all equipment, circuit breaker design. Provide panel schedules for the panel boards, electrical load calculations, fault current calculations, electrical single line diagrams, and any lighting photometrics required. All lights are LED in type. 1. Library/Recreational Complex: Provide separate 3 Phase 480V Service Entrance Section design for the building, utility coordination for incoming electrical service, panel board design for the entire building, building exterior and interior lighting design. All lighting selections are LED and all lighting design controls for energy conservation. Electrical design for HVAC systems, PA systems design, Fire alarm design, CCTV system design, Access control system design, Communications systems design (telephone, data, etc.). Provide any other miscellaneous items such as convenience outlets. Conductor and conduit sizing to all equipment, and circuit breaker design. Provide panel schedules for the panel boards, electrical load calculations, fault current calculations, electrical single line diagrams. Provide any lighting photometrics, back-up power (UPS) design and all grounding including specialty for telecommunications and data equipment, as well as any dedicated power feeds that were needed. Site: Provide separate 3 Phase 480V Service Entrance Section design for the Site. Utility coordination for incoming electrical service. Switchboard/Panel board design for site, sports fields and courts. General exterior lighting design per Town of Florence requirements, lighting design for all sports fields and courts and any necessary pathway lighting design. Lighting photometrics for each sports field and court. Lighting controls for each sports field and court. Provide any other miscellaneous items such as convenience outlets, conductor and conduit sizing to all equipment, circuit breaker design. Provide panel schedules for the panel boards, electrical load calculations, fault current calculations, electrical single line diagrams, communications design for the sports fields and court, any parking lot lighting and provisions for future lighting/electrical for any areas. | | |

Check if project performed with current firm



ATTACHMENT I – General Qualifications

ANNUAL REQUEST FOR QUALIFICATIONS AND EXPERIENCE NO:
ADSP015-00004729

STATE PROCUREMENT OFFICE
Department of Administration
100 North 15th Avenue, Suite 201
Phoenix, Arizona 85007

| | | | |
|----|--|-------------------------------------|--|
| 2. | (1) TITLE AND LOCATION (<i>City and State</i>) North Scottsdale Park and Ride (Scottsdale, Arizona) | (2) YEAR COMPLETED | |
| | | Professional Services 2011 | Construction (if applicable) 2013 |
| | (3) BRIEF DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE CRE prepared electrical and photovoltaic construction documents for the North Scottsdale Park and Ride. The project consisted of providing electrical, lighting and solar design that consisted of: service entrance section design and utility coordination, load calculations, panel schedules, fault current calculations, conductor and conduit sizing and power distribution to all lighting. The park and ride lighting design per City of Scottsdale and Scottsdale Airport requirements included: driving area lighting requirements, under canopy lighting requirements, passenger platform lighting requirements, landscape lighting design, bus bay lighting, seating area lighting design, signage lighting design, entry road lighting design, obstruction lights, and lighting design incorporating FAA guidelines. The solar design included: analysis with report showing cost comparisons of different solar installs, solar design incorporates a “grid tie-back” system, passive solar design while maintaining City of Scottsdale and Scottsdale Airport lighting standards and requirements, and power distribution to all solar equipment. | <input checked="" type="checkbox"/> | Check if project performed with current firm |
| 3. | (1) TITLE AND LOCATION (<i>City and State</i>) Salt River Pima Maricopa Indian Community, Lonely Cactus Solar Senior Housing (Scottsdale, Arizona) | (2) YEAR COMPLETED | |
| | | Professional Services 2012 | Construction (if applicable) 2014 |
| | (3) BRIEF DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE CRE prepared a set of electrical plans and specifications for the design of the solar design for the Lonely Cactus Senior Housing. The scope of work included solar design incorporating a “grid tie-back” system to offset 80% of the electrical consumption, power distribution to all solar equipment, solar conduit infrastructure and conductor design, inverter, combiner, panel, disconnect sizing, solar panel rack system, and structural analysis for additional roof load. The electrical plans provided met ECS and SRP-MIC requirements and SRP requirements for commercial solar projects. | <input checked="" type="checkbox"/> | Check if project performed with current firm |
| 4. | (1) TITLE AND LOCATION (<i>City and State</i>) Centennial Way Federal Aid – Transportation Enhancement (Phoenix, Arizona) | (2) YEAR COMPLETED | |
| | | Professional Services 2011 | Construction (if applicable) 2012 |
| | (3) BRIEF DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE CRE provided electrical, LED lighting and photovoltaic design for the improvements to Centennial Way to commemorate Arizona’s 100 th Year Anniversary. The electrical and LED lighting design consisted of eight major shade structures, 15 county displays, new street and pedestrian LED lighting including controls, undergrounding of existing street light power, and landscape irrigation system controls. Services included construction administration. | <input checked="" type="checkbox"/> | Check if project performed with current firm |
| 5. | (1) TITLE AND LOCATION (<i>City and State</i>) Tovrea Castle Parking Lot (Phoenix, Arizona) | (2) YEAR COMPLETED | |
| | | Professional Services 2009 | Construction (if applicable) 2012 |
| | (3) BRIEF DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE CRE provided electrical construction documents for the renovation of this historic site including an existing 600 square foot building, 48 parking spaces, and three small shade structures. Electrical design elements included replacement of the utility service entrance section, parking lot lighting, and lighting of the reception center. | <input checked="" type="checkbox"/> | Check if project performed with current firm |



ATTACHMENT I – General Qualifications

**ANNUAL REQUEST FOR QUALIFICATIONS AND EXPERIENCE NO:
ADSP015-00004729**

**STATE PROCUREMENT OFFICE
Department of Administration
100 North 15th Avenue, Suite 201
Phoenix, Arizona 85007**

4. Resumes of Key Personnel Proposed for this Contract *(Complete one Section 4 for each key person.)*

| | | | |
|---|--|--|---------------------------|
| a. NAME Randy Despain | b. ROLE IN THIS CONTRACT Senior Field Inspector | c. YEARS EXPERIENCE | |
| | | 1. TOTAL 33 | 2. WITH CURRENT FIRM 6 |
| d. LOCATION <i>(City and State)</i> Fountain Hills, Arizona | | | |
| e. EDUCATION <i>(DEGREE AND SPECIALIZATION)</i> B.S. in Construction Engineering | | f. PROFESSIONAL TRAINING – REGISTRATIONS | |
| g. OTHER PROFESSIONAL QUALIFICATIONS <i>(Organizations, Awards, etc.)</i> OSHA Safety Training and First Aid; Generac Power systems; IAEI – International Association Electrical Inspectors Associated Member | | | |

H. RELEVANT PROJECTS

| | | | |
|----|--|-------------------------------------|--|
| 1. | (1) TITLE AND LOCATION <i>(City and State)</i> Glendale Arrowhead Ranch Water Reclamation Facility (WRF) UV Replacement and Well 43 VFD Installation (Glendale, Arizona) | (2) YEAR COMPLETED | |
| | | Professional Services 2011 | Construction (if applicable) 2013 |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE CRE prepared a set of electrical plans and specifications for the design of the proposed VFD installation at Well 43. The new VFD replaced the existing constant speed pump motor, which did not provide operating flexibility and had high energy consumption. The project consisted of providing as-built review, pre-design site investigation, electrical site plan and single line diagram, schematics, and installation details of the new VFD installation. Services included design for Well 43 and construction administration for Arrowhead Ranch WRF UV Replacement. | <input checked="" type="checkbox"/> | Check if project performed with current firm |
| 2. | (1) TITLE AND LOCATION <i>(City and State)</i> City of Glendale - Bus Shelter Solar Lighting Assessment (Glendale, Arizona) | (2) YEAR COMPLETED | |
| | | Professional Services 2012 | Construction (if applicable) 2013 |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE CRE provided an electrical assessment for the 85 non-working solar lights for the bus shelters thru the City of Glendale. The electrical assessment included: electrically troubleshoot each bus shelter to find the cause of the problem as to why the solar lighting was not functioning, provide an Assessment Report explaining the issues of each bus shelter location, and then provide a Value Engineering Solution in the Report with sustainability fixes for each bus shelter lighting including approximate construction cost for the bus shelter fixes. | <input checked="" type="checkbox"/> | Check if project performed with current firm |
| 3. | (1) TITLE AND LOCATION <i>(City and State)</i> Estrella Pump Station (Avondale, Arizona) | (2) YEAR COMPLETED | |
| | | Professional Services 2013 | Construction (if applicable) 2014 |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE CRE provided electrical construction designs, specifications, and cost estimate for the Estrella Pump Station. The scope of work included an analysis of the existing service panel to determine if there is a need for replacement and a load study to verify if the existing APS utility service has adequate capacity to provide power to the new pumping system. The scope also included electrical engineering design for a new utility meter and power distribution panel to separate the site lights from the new pump station to receive a reduced electrical rate from the utility through their Pumping Rate electrical plan. Power distribution for new exhaust fans, a new lake aeration compressor, and the existing acid injection system, and enclosure lighting will be provided, as well. | <input checked="" type="checkbox"/> | Check if project performed with current firm |



ATTACHMENT I – General Qualifications

**ANNUAL REQUEST FOR QUALIFICATIONS AND EXPERIENCE NO:
ADSPO15-00004729**

**STATE PROCUREMENT OFFICE
Department of Administration
100 North 15th Avenue, Suite 201
Phoenix, Arizona 85007**

| | | | |
|----|--|-------------------------------------|--|
| 4. | (1) TITLE AND LOCATION <i>(City and State)</i> PSHIA Police Department K9 Hangar (Phoenix, Arizona) | (2) YEAR COMPLETED | |
| | | Professional Services 2013 | Construction (if applicable) 2014 |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE CRE provided electrical construction designs, plans and specifications for the upgrades to the Police Department K9 Hangar at PSHIA. The design documents included specification of new lighting fixtures, convenience receptacles, circuits for a new stove and washer/dryer, and coordination of electrical power requirements for replaced and relocated mechanical equipment. Circuit tracing was provided to properly label existing sub-panels. | <input checked="" type="checkbox"/> | Check if project performed with current firm |
| 5. | (1) TITLE AND LOCATION <i>(City and State)</i> City of Phoenix - Cesar Chavez Skate Park Lighting (Phoenix, Arizona) | (2) YEAR COMPLETED | |
| | | Professional Services 2013 | Construction (if applicable) 2014 |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE CRE prepared a set of electrical plans and specifications for the design of the additional lighting at the skate plaza, the open field area, and a new chilled water fountain at Cesar Chavez Park. At the skate plaza, the existing utility service and equipment was used to provide power to the new lighting system. LED fixtures with concrete poles were specified at the skate plaza. The open field area was designed with sports lighting for recreational soccer field use with additional security lighting fixtures at each sports pole. A new utility service entrance section was sized for additional future soccer field lighting. Electrical Engineer – Prime Consultant thru On-Call Contract. | <input checked="" type="checkbox"/> | Check if project performed with current firm |



ATTACHMENT I – General Qualifications

ANNUAL REQUEST FOR QUALIFICATIONS AND EXPERIENCE NO:
ADSP015-00004729

STATE PROCUREMENT OFFICE
Department of Administration
100 North 15th Avenue, Suite 201
Phoenix, Arizona 85007

5. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

(Present no more than five (5) projects. Complete one Section 5 for each project.)

| a. TITLE AND LOCATION (City and State) | b. YEAR COMPLETED | |
|--|-------------------------------|--------------------------------------|
| Cortez Pool Design (Phoenix, Arizona) | PROFESSIONAL SERVICES 2013 | CONSTRUCTION (If applicable) 2014 |

23. PROJECT OWNER'S INFORMATION

| c. PROJECT OWNER | d. ORIGINAL BUDGET/NTE AMOUNT OF PROJECT | e. TOTAL COST OF PROJECT |
|------------------|--|--------------------------|
| City of Phoenix | \$3.5 Million | Unknown |

f. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)

CRE prepared a set of electrical drawings, specifications and cost estimates for the Cortez Pool project located in Phoenix, Arizona. The project consisted of three separate pools and new equipment area. The existing electrical utility service from SRP is rated 200 Amps, 277/480 Volts, 3 phase, 4 wire. To support the new motor loads, the utility service was upgraded. The electrical design scope included the following: an upgrade to the existing electrical service entrance section with required utility coordination; grounding and bonding design per the National Electrical Code requirements; three phase electrical distribution for a motor control center at the equipment area; electrical distribution for underwater lighting, deck lighting, electrical infrastructure design for a future PA system, and other miscellaneous convenience outlets. Photometric calculations of the deck lighting was also provided.



ATTACHMENT I – General Qualifications

ANNUAL REQUEST FOR QUALIFICATIONS AND EXPERIENCE NO:
ADSP015-00004729

STATE PROCUREMENT OFFICE
Department of Administration
100 North 15th Avenue, Suite 201
Phoenix, Arizona 85007

5. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

(Present no more than five (5) projects. Complete one Section 5 for each project.)

| a. TITLE AND LOCATION (City and State) | b. YEAR COMPLETED | |
|--|-----------------------|------------------------------|
| | PROFESSIONAL SERVICES | CONSTRUCTION (If applicable) |
| Cesar Chavez Park Skate Plaza Lighting-Drinking Fountain | 2013 | 2014 |

23. PROJECT OWNER'S INFORMATION

| c. PROJECT OWNER | d. ORIGINAL BUDGET/NTE AMOUNT OF PROJECT | e. TOTAL COST OF PROJECT |
|------------------|--|--------------------------|
| City of Phoenix | Unknown | Unknown |

f. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)

CRE provided electrical and civil construction designs, specifications, and cost estimate for the additional lighting at the skate plaza and the open field area, and a new chilled water fountain at Cesar Chavez Park.

At the skate plaza, the existing utility service (SRP meter # 2328408, rated at 200 Amps, 277/480 Volts, 3 phase) and equipment was used to provide power to the new lighting system. The circuits originate from the existing spare 20 Amp, 3 pole circuit breakers in Panel "S". The spare lighting contactor within this equipment was also utilized. There are 2-2" spare underground conduits from Panel "S" which terminate in an underground junction box located on the southwest corner of the park loop drive which was utilized for the new skate park and chilled water fountain circuits. LED fixtures with concrete poles were specified at the skate plaza.

Two lighting options, along with estimated construction costs and photometric calculations, were provided for the open field area and presented at the 30% submittal. The first option provided security lighting only for this area. The second option provided sports lighting for recreational soccer field use with additional security lighting fixtures at each sports pole. A new utility service entrance section was required for both options. Utility coordination was provided.

The scope of work included civil engineering services to design approximately 680 linear feet of a new water service for the new drinking fountain to be installed at the skate plaza. Proposed recommended locations for the water fountain were provided at the 30% submittal. The drain line was connected to the existing septic system upstream of the existing septic tank.



ATTACHMENT I – General Qualifications

ANNUAL REQUEST FOR QUALIFICATIONS AND EXPERIENCE NO:
ADSP015-00004729

STATE PROCUREMENT OFFICE
Department of Administration
100 North 15th Avenue, Suite 201
Phoenix, Arizona 85007

5. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

(Present no more than five (5) projects. Complete one Section 5 for each project.)

| | | |
|--|-------------------------------|--|
| a. TITLE AND LOCATION <i>(City and State)</i> Desert Sky Transit Center | b. YEAR COMPLETED | |
| | PROFESSIONAL SERVICES 2014 | CONSTRUCTION <i>(if applicable)</i> In Progress |

23. PROJECT OWNER'S INFORMATION

| | | |
|-------------------------------------|--|---|
| c. PROJECT OWNER City of Phoenix | d. ORIGINAL BUDGET/NTE AMOUNT OF PROJECT \$7,523,430.81 | e. TOTAL COST OF PROJECT In Progress |
|-------------------------------------|--|---|

f. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)

CRE prepared a set of electrical plans and specifications for the design of the Desert Sky Transit Center. The project consisted of providing electrical, lighting and solar design (cost-neutral photovoltaic system) that consisted of: service entrance section design and utility coordination, load calculations, panel schedules, fault current calculations, conductor and conduit sizing. The Transit Center lighting design per City of Phoenix requirements included: driving area lighting, under canopy lighting, passenger platform lighting, landscape lighting, seating area lighting, signage lighting, entry road lighting and coordination with the design team for the best wiring routing, as well as power distribution to all lighting. Solar design included: analysis with a report showing cost comparisons of different solar installs, solar design incorporating a "grid tie-back" system, coordination with the utility company and the City of Phoenix to provide a cost-neutral solar design while acquiring the best available rates for solar, power distribution to all solar equipment, and provisions for possible future consideration (conduit infrastructure) and the use of solar panels (non-film). Power distribution and conduit infrastructure for CCTV and site special systems, building electrical and lighting design based on a building up to 2,500 square feet. Power distribution was provided to any interpretive displays that needed electricity and to site maintenance receptacles.



ATTACHMENT I – General Qualifications

ANNUAL REQUEST FOR QUALIFICATIONS AND EXPERIENCE NO:
ADSP015-00004729

STATE PROCUREMENT OFFICE
Department of Administration
100 North 15th Avenue, Suite 201
Phoenix, Arizona 85007

5. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

(Present no more than five (5) projects. Complete one Section 5 for each project.)

| a. TITLE AND LOCATION <i>(City and State)</i> | b. YEAR COMPLETED | |
|---|-------------------------------|--|
| Phoenix Deer Valley Airport Taxiway A Relocation and Reconstruction and Run Up Area (Deer Valley, Arizona) | PROFESSIONAL SERVICES 2013 | CONSTRUCTION <i>(If applicable)</i> In Progress |

23. PROJECT OWNER'S INFORMATION

| | | |
|---|--|---|
| c. PROJECT OWNER City of Phoenix – Aviation Department, Deer Valley Airport | d. ORIGINAL BUDGET/NTE AMOUNT OF PROJECT \$4,763,000.00 | e. TOTAL COST OF PROJECT In Progress |
|---|--|---|

f. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)

The project consisted of providing electrical construction drawings for the reconstruction of Taxiway A at Phoenix Deer Valley Airport. The taxiway was reconstructed to a width of 35' with 12' unpaved shoulders (previous with was 40' with paved shoulders). The project included phasing for construction. Electrical demolition included the existing taxiway edge lighting, and modifications to the existing airfield lighting signage systems. The electrical design consisted of a new taxiway edge lighting system to include 5kV airfield lighting cable homerun replacement back to the existing electrical vault utilizing the existing ductbank and handhole infrastructure, specification of new LED Medium Intensity Edge Lights (MITL) in new light bases and isolation transformers, relocation of airfield guidance signs and modifications as required to meet current FAA AC requirements which required a new ductbank system north of the taxiway, and adjustments to the existing elevated runway guard lights which were affected by the reconstruction. The scope also included electrical design as required to the demolition of the existing gate controls located underground at the north end of the A3 intersection and new obstruction lights on the blast fence. Electrical Engineering Sub - Consultant – Services provided include Electrical System Design and Construction Administration Services.



ATTACHMENT I – General Qualifications

ANNUAL REQUEST FOR QUALIFICATIONS AND EXPERIENCE NO:
ADSP015-00004729

STATE PROCUREMENT OFFICE
Department of Administration
100 North 15th Avenue, Suite 201
Phoenix, Arizona 85007

5. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

(Present no more than five (5) projects. Complete one Section 5 for each project.)

| a. TITLE AND LOCATION <i>(City and State)</i> | b. YEAR COMPLETED | |
|--|-----------------------|-------------------------------------|
| | PROFESSIONAL SERVICES | CONSTRUCTION <i>(If applicable)</i> |
| Salt River Pima Maricopa Indian Community (SRPMIC), Lonely Cactus Solar Senior Housing (Scottsdale, Arizona) | 2012 | 2014 |

23. PROJECT OWNER'S INFORMATION

| c. PROJECT OWNER | d. ORIGINAL BUDGET/NTE AMOUNT OF PROJECT | e. TOTAL COST OF PROJECT |
|--|--|--------------------------|
| Salt River Pima- Maricopa Indian Community | Unknown | Unknown |

f. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)

CRE prepared a set of electrical plans and specifications for the design of the solar design for the Lonely Cactus Senior Housing. The scope of work included solar design incorporating a "grid tie-back" system to offset 80% of the electrical consumption, power distribution to all solar equipment, solar conduit infrastructure and conductor design, inverter, combiner, panel, disconnect sizing, solar panel rack system, and structural analysis for additional roof load. The electrical plans provided met ECS and SRP-MIC requirements and SRP requirements for commercial solar projects.



ATTACHMENT I – General Qualifications

ANNUAL REQUEST FOR QUALIFICATIONS AND EXPERIENCE NO:
ADSP015-00004729

STATE PROCUREMENT OFFICE
Department of Administration
100 North 15th Avenue, Suite 201
Phoenix, Arizona 85007

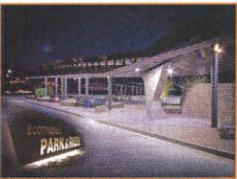
6. ADDITIONAL INFORMATION

a. PROVIDE ANY ADDITIONAL INFORMATION YOU FEEL MAY BE NECESSARY TO DESCRIBE YOUR FIRMS QUALIFICATIONS. (ATTACH ADDITIONAL SHEETS AS NEEDED.)

Firm’s Capabilities and Resources:

CR Engineers, Inc. (CRE) is a Consulting Electrical Engineering firm, founded in 1985, and located in Fountain Hills, Arizona. CRE is a woman-owned disadvantaged small business and an S Corporation. We maintain the following business certifications: SBE/SBC with the City of Phoenix, and DBE under the Arizona Unified Certification Program. We serve the electrical engineering needs of the aviation, federal and public works, commercial, and industrial markets, and excel at technically complicated and specialized projects such as the electrical design of aeronautical ground lighting (AGL) systems and photovoltaic power systems.

Transportation



CR Engineers, Inc. (CRE) has extensive history in street and roadway lighting design, providing numerous such designs for the various cities throughout Arizona including: ADOT, City of Phoenix, Scottsdale, Tempe, Glendale, Mesa, Chandler, Gilbert, and Casa Grande. We have expertise in AGI-32, and Genesys II programs. Our use of this software allows us to produce a lighting model that helps us optimize light distribution, conserve energy, and maintaining safe light levels in public areas. The graphic representations substantially aid in visualizing the effectiveness of the lighting design at a glance. It only takes a few minutes to produce the lighting models, so several computer runs using different input data (height, spacing, type of luminaries, etc.) can be cost-effectively produced to help optimize our designs. Combined with our other CAD and Micro Station software packages, we are prepared to perform any lighting design task to meet the projects needs.

Photovoltaic Power System Design



CRE has the expertise to provide complete photovoltaic power system designs from sizing of solar modules to engineering the connectivity to the conventional electrical panel. All of our electrical and solar designs meet the requirements of the National Electrical Code, Electrical Utility Standards and specific City Standards. We can also provide our clients with a cost benefit analysis that includes all current and state cost incentives, solar options, power output, payback times and related construction costs for each photovoltaic option provided.

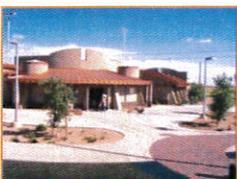
Recreation



CRE can offer the following engineering services for your recreational facility: design and specifications for electrical power distribution, lighting, public address and security systems, computer aided photometric calculations, and design of lighting controls. Our extensive experience in the lighting design of soccer and baseball fields, skate parks, volleyball, basketball, tennis and racquetball courts, children’s playgrounds, pathway and parking lot lighting, and electrical designs for aquatic centers is unsurpassed by any other firm in the Phoenix area. Our innovative design approaches have won CRE numerous recognition and awards.

We understand the importance of creating an inviting and safe area for the public to enjoy.

Building/Special Systems Design



CRE has an extensive variety of expertise in providing electrical and special system designs for buildings, including commercial, industrial, municipal, church, and medical facilities. Energy management, electrical designs for the healthcare industry, and special system designs including fire alarm, security and CCTV systems, and telecommunications using fiber optic technology are also part and parcel of the CRE skill set. Our team attends frequent training classes and seminars



in order to remain updated with the latest advances in technology concerning all life safety system design applications. We are dedicated to providing our staff with frequent educational opportunities in all National Electrical Code



ATTACHMENT I – General Qualifications

ANNUAL REQUEST FOR QUALIFICATIONS AND EXPERIENCE NO:
ADSP015-00004729

STATE PROCUREMENT OFFICE
Department of Administration
100 North 15th Avenue, Suite 201
Phoenix, Arizona 85007

changes, and we can renovate and update systems to correct Electrical Code violations. We are experienced in forensic electrical engineering, light level verification, ultrasonic light pole testing, blue light test and other electrical testing of existing conditions.

Construction Administration Services



CRE can also provide full electrical construction management and inspection services. We have a highly trained staff of dedicated electrical inspectors to provide numerous services during construction. Our extensive experience and knowledge of National Electrical Code, IBC, and multiple Arizona city code requirements enable us to fulfill all project needs. Services include: load and meter testing and diagnostics; submittal review; site observations, punch list preparation, and record drawings. CRE can provide electrical design and construction services for UPS, standby and emergency generator design; medium voltage distribution design; inspections and renovations of existing systems to correct National Electric Code (NEC) violations; ground testing; and ARC flash analysis.

CADD Department Services

CRE has an "in-house" design department. That is trained in the following programs AutoCAD 2015, and Micro-Station. The CADD department provides in-house design and drafting services for client/owner needs. It maintains CADD Standards to ensure quality project drawings. Our lighting department experience combined with the computational tools of Visual and AGI-32 Lighting software, allows us to calculate the lighting effect changes without wait involved in contracting a lighting supply vendor. This allows maximum flexibility in creatively meeting the client's needs.

7. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS

| | |
|---|-----|
| a. Percentage of Total Work Attributable to State, Federal and Municipal Government Work: | 95% |
| b. Percentage of Total Work Attributable to Non-Government Work: | 5% |

8. AUTHORIZED REPRESENTATIVE. The foregoing is a statement of facts.

Signature: Catherine Alcorn

Date: December 8, 2014

Name: Catherine Alcorn

Title: PE/ President